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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,963	07/19/2004	Hideo Tomiyama	00631000068	8434

7590 08/07/2007
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EXAMINER

GUIDOTTI, LAURA COLE

ART UNIT	PAPER NUMBER
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1744

MAIL DATE	DELIVERY MODE
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08/07/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/501,963	Applicant(s) TOMIYAMA, HIDEO	
	Examiner Laura C. Guidotti	Art Unit 1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-17 is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12022004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 1-3, 5-10, and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 Lines 2 and 13, Claim 2 Line 12, Claim 5 Line 17, Claim 7 Line 1, Claim 8 Line 2, Claim 9 Line 1 it is unclear as to what is meant by "a sheet-like brush unit." From the drawings and specification, it is unclear how the brush unit is like a sheet or what "sheet-*like*" means.

Claim 1 Line 14, Claim 2 Line 13, Claim 5 Line 19, Claim 10 Line 12 recites "bristles (wires)" which is somewhat confusing and it is improper to use parentheses in such a way.

Claim 2 recites the limitation "the brush unit" in Line 16. There is insufficient antecedent basis for this limitation in the claim.

Claim 2 Line 20 it is unclear as to what is meant by "a roll-like".

In both claims 2 and 10, it is unclear as to what is meant by "taking out the brush unit, together with the core pipe, *to the exterior* of the pedestal"? It appears that the grammar may be confusing, does Applicant intend a step of removing from the pedestal, the brush unit with the core pipe?

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Claim 3 recites the limitation "the tips" in Line 16 and Claim 6 recites the limitation "the tips" in Line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 12 recites the limitation "the center of the projected side" in Line 7. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Tomiyama, WO/99/66815 (US 6,471,300 relied upon as English translation of WO/99/66815).

Tomiyama discloses the claimed invention including a "sheet-like" brush unit (7) that is overlaid in plurality to form a rotary toothbrush (Figure 7f, 5), wherein a wire group is formed (6) with wires extending in radial directions (see Figures), there is a center portion having an annular shape that is circular in form being a circular insert hole (7a) (claims 7-9). Further regarding claim 8, there is a core pipe inserted into the insert hole (S). Further regarding claim 9, the rotary brush is supported in a rotatable manner in a handle member (as shown in Figure 1, Column 3 Lines 5-52 of US 6,471,300). Claims 7-9 are product-by-process claims, and therefore "[E]ven though product-by-process claims are limited by and defined by the process, determination of

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patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 4, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over VanClief, Jr., US 2,890,921 in view of Tomiyama, WO/99/66815 (US 6,471,300 relied upon as English translation of WO/99/66815).

VanClief, Jr. teaches a brush unit manufacturing method comprising the steps of projecting a wire group formed by assembling together a plurality of wires in a bundle outward through an insert hole provided in a pedestal (Figure 11, “X” is the wire group, the insert hole of a pedestal is the bottom hole of 136), inserting a cone into the center of the projected end of the wire group to push open the wire group in radial directions (83, Figures 12-16); attaching a center portion of the wire group in an annular shape (via retaining ring 31, see Figures 12-13), to form a sheet-like brush having a hub at the center and having a plurality of wires projecting radially from the hub (as shown in Figures 18-23). Regarding claim 4, there is a device comprising a pedestal (136)

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having an insert hole (unlabeled, see Figure 11), through which a wire group ("X", Figure 11) is formed, a chuck (146), and a pressing member (152, 153). Regarding claim 11, there is a step of concentrically overlaying the brush units in a plurality to form a rotary brush (as shown in Figures 19-23) and thereafter mounting the rotary brush to a handle member (as 131 is capable of acting as a handle). VanClief, Jr. fixes the wire group in an annular shape via a retaining ring (31), and does not including a step of welding a center portion and cutting the inner side of the annular welded part or a machine element of a welder or cutting machine.

Tomiyama teach a rotary brush wherein the bristles are bend over a retaining wire (7b, Figure 7a) and then welded by heating the material to bind the bristle to the retaining wire (at 7a, Figure 7b), excess material is then removed by cutting (as 7e is cut, as shown in Figure 7d), these steps are done by a welder and cutting machine (US 6,471,300 Column 3 Lines 5-8).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify the method of attaching a retaining device to radially expanding wire so that welding and then cutting the inner side, as Tomiyama teaches, in order to secure and meld the bristle material to a retaining wire together and to cut off excess material so that a central rod may pass through the annular portion.

Allowable Subject Matter

4. Claims 13-17 are allowed.

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5. Claims 2-3, 5-6, 10, and 12 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

6. The following is a statement of reasons for the indication of allowable subject matter:

None of the prior art made of record includes a rotary brush manufacturing method comprising the steps of projecting a wire group, inserting a cone into the center of the projected end of the wire group to push open the wire group in a radial direction, welding a center portion of the wire group in an annular shape, cutting the inner side of the annular welded part to form a brush unit having a hub at the center thereof, making a core pipe, taking the brush unit out together with the core pipe to the exterior of the pedestal, repeating all of these steps to make a plurality of brush units to be held in the core pipe thereby forming a rotary brush. None of the prior art made of record further includes a manufacturing device having a pedestal, a chuck, a cone, a pressing member, a welder, a cutting machine, and a pipe handling machine. None of the prior art made of record further includes a method of manufacturing a brush comprising a first step of projecting a wire group, a second step of blowing air into the center of a side of the wire group, a third step of welding a center portion to the wire group with the opened wire group being fixed to the pedestal, and a fourth step of cutting off a central part of the welded center portion. None of the prior art made of record includes a device for manufacturing a brush unit comprising a pedestal having an insert hole, a chuck, a nozzle for blowing air, a pressing member, a welder, and a cut-off means.

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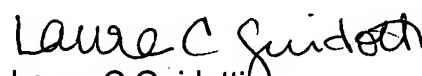
Tomiyama and VanClief, Jr. do not teach a pipe handling machine, a step to make a core pipe and taking the brush unit out together with the core pipe, a step of blowing air, or a nozzle for blowing air.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura C. Guidotti whose telephone number is (571) 272-1272. The examiner can normally be reached on Monday-Thursday, 7:30am - 5pm, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on (571) 272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Laura C Guidotti

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Patent Examiner
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